(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau





(43) International Publication Date 14 April 2005 (14.04.2005)

PCT

(10) International Publication Number WO 2005/034418 A1

- (51) International Patent Classification7: H04L 1/18, 12/56
- (21) International Application Number:

PCT/SE2004/001438

- (22) International Filing Date: 7 October 2004 (07.10.2004)
- (25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

0302685-3

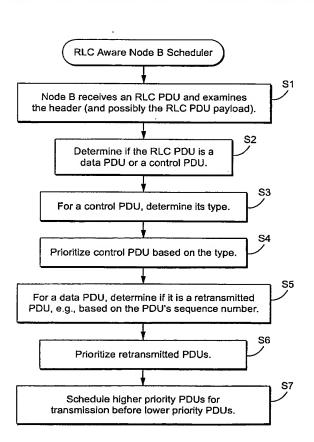
7 October 2003 (07.10.2003) S

- (71) Applicant (for all designated States except US): TELE-FONAKTIEBOLAGET LM ERICSSON (PUBL) [SE/SE]; Torshamnsgatan 23, S-164 83 Stockholm (SE).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): TORSNER, Johan [SE/FI]; Skogstorpsvägen 2C9, FIN-02430 Masaby (FI).

- (74) Agent: MAGNUSSON, Monica; Ericsson AB, Patent Unit Radio Networks, S-164 80 Stockholm (SE).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,

[Continued on next page]

(54) Title: MEDIUM ACCESS CONTROL PRIORITY-BASED SCHEDULING FOR DATA UNITS IN A DATA FLOW



(57) Abstract: A data communication having at least one data flow is established over a wireless interface between a radio network and a user equipment node (UE). A medium access control (MAC) layer located in a radio network node receives data units from a higher radio link control (RLC) layer located in another radio network node. Some or all of a header of a RLC data units associated with the one data flow is analyzed at the MAC layer. Based on that analysis, the MAC layer determines a priority of the data unit relative to other data units associated with the one data flow. The MAC layer schedules transmission of higher priority data units associated with the one data flow. The priority data units associated with the one data flow. The priority determination does not require extra priority flags or signaling.

WO 2005/034418 A1



SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE,

BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for the following designation US
- of inventorship (Rule 4.17(iv)) for US only

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.